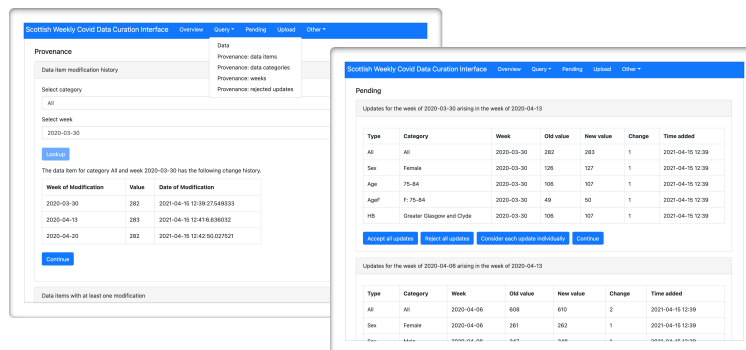


Links between temporal databases and curation

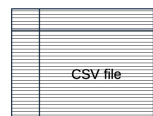


Vashti Galpin, Simon Fowler, James Cheney

- Curation of scientific databases requires significant effort
- Update provenance information allows for analysis of data changes
- Recording modification decisions is an important component of curation



- The prototype curation interface is a web application written in Links.
- A valid-time database table is used to store fatality counts
- When new data is uploaded, a comparison is made with existing data and changes are highlighted.
- Queries are made that consider how the data has changed over time.



How many deaths were reported in the week of 5 July?

How were those deaths distributed across the health boards?

How many deaths were first reported in week of July 5?

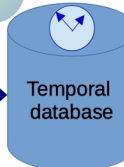
How does that differ from the most recently reported figure?

Which health boards reported the most changes?

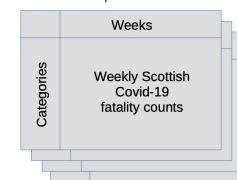
Curation interface



Provenance data and queries



Spreadsheets



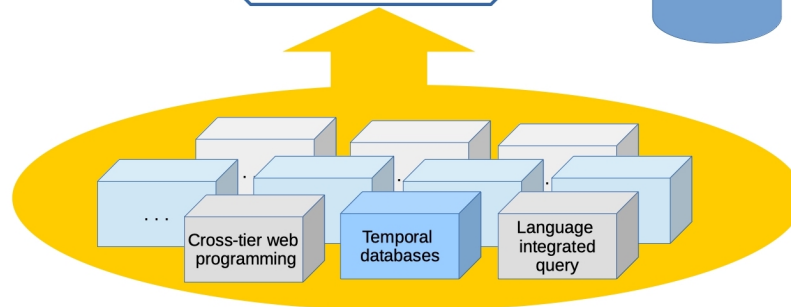
National Records of Scotland
www.nrscotland.gov.uk/statistics-and-data



Temporal database table

Week date	Category	Fatality count	File_id	Date_valid_from	Date_valid_to

- Temporal databases use time periods to track when data is valid according to transaction time or another metric of validity.
- Database tables typically have additional fields for the start and end of this period
- Temporal queries use this time information



- Links is a cross-tier programming language that allows web applications, program logic and database server interaction to be coded in a single language.
- Links supports language-integrated query and temporal databases.